

REMARKS

The Examiner's Action mailed on July 16, 2007, has been received and its contents carefully considered.

In this Amendment, Applicant has amended claims 1, 4 and 8. Claims 1, 4 and 8 are the independent claims, and claims 1-14 remain pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

The requested form PTO-1449 was submitted on July 24, 2006, and Applicant reserves the right to submit proof thereof, but merely submits a copy of the form herewith at this time.

Claims 1-14 were rejected under 35 USC §112, ¶2 as indefinite. This rejection is respectfully traversed.

Claims 1 and 8 have been amended as suggested to recite "addressing the data stored in the second data storage section by the data rearrangement information" to overcome this rejection, and claim 4 has been correspondingly amended to recite "addressing the data stored in the first data storage section by the data rearrangement information".

It was noted in the Office Action that in claim 4 the first data storage section is recited instead of the second, and that this appears to be inconsistent. Please note, however, that this results from the way that data rearrangement information is used. In claim 4, the data rearrangement information is used for reading data,

whereas in claims 1 and 8, the data rearrangement information is used for storing data.

Claims 1-14 were rejected under 35 USC §102(b) as anticipated by *Durbin* (US 4,611,310). This rejection is respectfully traversed.

Independent claims 1 and 8 presently recite "storing the data in a rearranged order in a second data storage section *based on the data rearrangement information stored in the stack*" and claim 4 presently recites "reading the plurality of data stored in the first data storage section in an order *based on the data rearrangement information stored in the stack*" (*emphasis added*).

The Office Action alleges that sort RAM 200, Output RAM 300, and stack RAM 334 of *Durbin* constitute the claimed first data storage section, second data storage section, and stack respectively. However, the stack RAM 334 of *Durbin* is not equivalent to the stack of the present invention.

In the present invention, the data and its address (data rearrangement information) are separately controlled and stored in the storage section and the stack respectively. On the other hand, in *Durbin*, data is rearranged according to keyfield and sub-keyfield values, which therefore constitute data rearrangement information, which is not stored in the stack RAM 334, i.e. there is no "data rearrangement information stored in the stack" as recited in claim 1.

The Office Action alleges that *Durbin* shows storing data rearrangement in a stack in column 10, lines 1-40:

Briefly, it will be remembered that records having an address corresponding to the column position of set bits in the same Sort RAM row have the same most significant sub-keyfield values. Therefore, during the first pass through the Address Rearranging process, Sort RAM rows having more than 1 set bit are loaded into the Stack RAM 334 at consecutive addresses beginning with address 0 and increasing thereafter. *Also loaded into the Stack RAM 334 is the corresponding Output RAM starting address. An Odd Pass counter 338, operating as an upward counter, selects the appropriate address of the Stack RAM 334.*

With reference to the sample records shown in FIG. 2A, at the completion of the first pass the record addresses written to the Output RAM 300 are arranged into the order shown in FIG. 2B. The Stack RAM will be as shown in FIG. 6A: entry 0 shows that records 4 and 6 have the same most significant sub-keyfield value, and that the corresponding Output RAM starting address is 0; and entry 1 shows that records 1 and 3 have the same most significant sub-keyfield value, and that the corresponding Output RAM starting address is 2.

Upon completion of the first pass, the Stack RAM entries are successively removed in reverse order (i.e., last in-first out (LIFO)) and a second pass is performed; i.e., the two-step procedure is appropriately repeated separately for each group of records using the second most significant sub-keyfield. The Odd Pass counter 338 now operates as a downward counter to select the appropriate row of the Stack RAM 334. In the present example, therefore, entry 1 comprising records 1 and 3 is first to be removed. As shown in FIG. 2B, records 1 and 3 have second most significant sub-keyfield values of 118 and 116, respectively. Hence, at the completion of the Memory Loading process the arrangement of bits in the Active Flag Register, Duplicate Flag RAM and Sort RAM will be as shown in FIG. 5B. Further, at the completion of the Address Rearranging process, the position of their corresponding addresses written to the Output RAM is reversed as shown in FIG. 2C.

The Office Action also alleges that the claimed data arrangement information is output addresses of the Output RAM 300, referring to lines 8-12, *emphasized in italics* above. However, this only states that an Output RAM *starting address* is loaded into the Stack RAM 334. That is, Stack RAM 334 stores a starting address to which the data currently stored in the stack is to be

written, but it does not store data rearrangement information (keyfield and sub-keyfield values).

Durbin therefore fails to teach or suggest "storing the data in a rearranged order in a second data storage section *based on the data rearrangement information stored in the stack*" as recited in claims 1 and 8 or "addressing the data stored in the first data storage section by the data rearrangement information" as recited in claim 4.

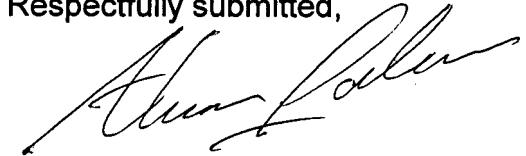
Consequently, independent claims 1, 4 and 8 patentably define over *Durbin* and are allowable, together with claims 2, 3, 5-7 and 9-14 that depend therefrom.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should any fee be required, however, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,



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Date

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AMENDMENT

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